



Forth and Tay Regional Advisory Group (FTRAG) Minutes of Meeting

Meeting:	Forth and Tay Regional Advisory Group – Ornithology Subgroup
Location:	Virtual/Teams
Date, Time :	31/05/2022
Attendees:	<p><u>Marine Scotland</u> - Jared Wilson, Chair (JW), Alexander Gilliland (AG), Fiona Martin (FM), Gayle Holland (GH), Jane Renwick (JR), Rebecca Ross (RR), Sue O'Brien (SO), Tom Evans (TE)</p> <p><u>NatureScot</u> - Malcolm Fraser(MF), Glen Tyler (GT)</p> <p><u>Berwick Bank</u> - Andrew Logie (AL)</p> <p><u>Inch Cape</u> – Sarah Arthur (SA), Stuart McCallum (SM), Murray Grant (MG – RHdhv)</p> <p><u>Neart na Gaoithe</u> – Claire Gilchrist (CG), Polly Tarrant (PT), Colin Barton (CB - Cork Ecology),</p> <p><u>Seagreen</u> - Nick Brockie (NB), Andie Nicholls (AN - RPS), Mike Armitage (MA – RPS)</p> <p><u>Strix</u> - Luis Pina (LP), Miguel Repas Gonçalves (MRG), Paulo Catry (PC), Pedro Segurado (PS), Ricardo Oliveira (RO), Martin Perrow (MP-ECON) Roel May (RM- NINA)</p> <p><u>CEH</u> - Maria Bogdanova (MB)</p> <p><u>RSPB</u> - Aly McCluskie (AM), Jude Lane (JL),</p> <p><u>JNCC</u> - Julie Black (JB), Rebecca Hall (RH)</p>
Apologies	Erica Knott (EK) - NatureScot

Minutes taken by:	RPS
Date Issued – Draft for Comment:	
Date issued - Final:	

Minutes			
Agenda Ref	Topic	Action	Action owner
1.0	Introductions		
1.1	Introductions completed by all present		
2.0	Previous Minutes and Matters arising		
2.1	Previous minutes accepted		

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2.2	Action tracker to be circulated with minutes to remind individuals of assigned actions for completion prior to next meeting (see Item 6).	Circulate Action Tracker with minutes	NB
3.0	Project Updates		
3.1	<p><u>Seagreen</u> (NB)</p> <ul style="list-style-type: none"> • 21 WTGs installed, jacket installation resuming June 22nd. • OSP jackets and topside installed • Export cable 1 installed, export cable 2 underway with export 3 cable in August • Onshore – ducts are in place and cable pull underway • Substation is being commissioned • Power export expected in July 22 • Stage 1 will be 114 WTGs • Stage 2 (next 36 WTG) to be connected to Cockenzie - programme TBC (CFD outcome dependent) 		
3.2	<p><u>Near na Gaoithe</u> (CG)</p> <ul style="list-style-type: none"> • First jackets being installed (2) at OSPs • Drilling campaign S7000 stopped in summer 2021 – due to recommence • Pile installation commenced Nov 21, 22/56 so far • Export Cables installed 2021 • Over trawl trials completed in Feb 22 – no issues • Blades and tower sections at port of Dundee • Deliveries to come over next few months • Assembly early 2023 • OSP jackets installed, as well as south topside • SOV coming in July to assist with hook up of export cable • Last kms installed in seabed, to be pulled into topside in July • O&M base at Eyemouth – completed by July • Updated construction programme following delays (COVID related) • Fully operational pushed to Jan 2024 • In process of finalising O&M programme with MSLOT 		
3.3	<p><u>Berwick Bank</u> (AL)</p> <ul style="list-style-type: none"> • Scoping opinion received early Feb 2022 • Boundary under review – reducing boundary by c 20% to reduce impacts on ornithology (on top of 10% already reduced in summer 2021). Boundary reduction would also reduce MPA overlap and reduce Shipping & Navigation impacts. • Slide pack explaining the changes coming soon 		



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3.4	<ul style="list-style-type: none"> • New baseline densities being completed for revised boundary area; revising CRMs, Displacement, Apportioning & PVA • Programme delayed – target now Nov/Dec 2022 <p><u>Inch Cape</u> (SA)</p> <ul style="list-style-type: none"> • SI campaign completed • Refining layout and will provide more detailed updated next meeting • Expect variation to current consents 		
4.0	Seabird Interactions Study (Strix)		
4.1	<p>Presentation (see accompanying slides)</p> <p>MRG/LP (Strix) lead presentation of the planned Seabird Interactions Study at the Neart na Gaoithe Site. The drivers for the study arise from earlier FTRAG-O discussions about the consent requirement to participate in regional and/or strategic studies including collision/avoidance interactions</p> <p>LP described the project team and subcontractors providing specialist technical support. Roel May (NINA) will be the Principal Investigator (PI) of the project, coordinating all activities towards the scientific goals, and Martin Perrow (ECON) is the expert with local knowledge and will coordinate the on-site ornithologists team.</p> <p>The planned study will look at the high level research questions around collision occurrence, empirical methods to measure this and what are the avoidance rates. The study will focus on Kittiwake and Gannet, identified as key species at risk of collision, with a duration of 2 years, focussed on breeding and post-breeding periods. Monitoring will be undertaken at the NNG site, in collaboration with Seagreen and Berwick Bank projects. Significant input was provided by the study Advisory Panel (MSS, NS, JNCC, RSPB)</p> <p>The study goals are to improve understanding of seabird behaviour and interactions around WTGs, focusing on empirical measures of collision rates, and observation of 3D flight behaviour in micro, meso and macro avoidance zones, using a combination of high resolution cameras integrated with 3D radar systems at 3 locations, installation of a Collision Detection System (CDS) at 6 locations, and supporting boat based surveys. The study will integrate the outputs from the different monitoring modules within the study to understand seabird behaviour and risk at macro, meso and micro scales.</p>		

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	<p>Equipment being is currently being manufactured and prototypes being tested. The study programme is</p> <ul style="list-style-type: none"> • Manufacture and Testing 2022 • Installation 2023 • Detailed planning during second half of 2023 • Study taking place early 2024 – early 2026 		
<p>4.2</p>	<p><u>Discussion</u></p> <p>JW - questioned what the expected density of bird tracks that might be achieved inside vs outside the site? Also queried details on the planned boat surveys?</p> <p>LP - the number of tracks approaching the site, inside and as they leave requires the radar to be fine-tuned once installed and operational.</p> <p>MP – The bat survey methods still to be decided</p> <p>AM – Queried the use of 2 x length of rotor swept zone in relation to the definition of micro/meso avoidance behaviour. What other data has been considered to inform, e.g. aerial survey/tagging?</p> <p>MRG – Strix have not considered using other data yet, but this could be looked at. The study design was carefully thought through to respond to the FTRAG-O questions posed however these details can be refined during the analysis stage in consultation with the Advisory Panel.</p> <p>PC – The boat survey is not intended to collect primary data, the boat will be stationary within site at specific locations to help with calibration and estimate false negative rates of system etc. Comparisons of track length and density will be used, with positions recorded every 1s, to compare utilisation inside and out</p> <p>RM – Models will be used to identify reactive behaviours. This will examine what sort of avoidance occurs and at what distances</p> <p>AM – Referring to other sources of data again, there is discussion ongoing of analytical methods for the Forth & Tay tagging studies. There is potential for commonalities with this Seabird Interactions Study, which should be borne in mind.</p> <p>SO – Also highlighted the PrePARED study (OWEC funded). This seeks to establish prey fish distributions on broad scale and at a fine scale around turbines. There is potential for this information to be included as an environmental variable that might explain bird movements</p> <p>AN – Will deployment of 6 CDS within the NNG OWF be sufficient coverage to detect change from the expected number of collisions?</p>		



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	<p>PS - A power analysis was carried out using the predicted number of collisions. Collisions are expected to be rare events, but the study as design will enable estimates of response rates even if there are insufficient collision events.</p> <p>MB – Is there potential for collaboration with other studies (e.g. simulation of tracks using GPS track data). Is there a control to compare birds’ natural movement in the absence of wind turbines? What about the effect of weather conditions on cameras/ video footage? Is data capture during stormy, foggy weather affected?</p> <p>RO - There are weather limitations for operational range. Radar will dampen in very bad weather. It is still possible to detect through fog with the radar, but loss of visibility limits species ID and interaction between radar and camera. The expectation is that significant amounts of data will be acquired.</p> <p>MP – The most powerful comparison is between before and after, so data collected pre-construction is of real value and we have those data</p> <p>JW – There is already a lot of data and analysis in the Forth & Tay area. It will be important to capitalise on this. Also, the limitations due to weather etc must be acknowledged in the analysis during the write up of study</p> <p>JM - Is there provision for data collection to account for birds resting around turbines?</p> <p>RO – This is not currently possible. CDS cameras face upwards covering the rotor zone blade and a small buffer around it. It could be possible to point one of the long-range cameras to look at what is happening in that respect.</p> <p>RM - We could potentially record those observations if desired.</p> <p>TE - Is there a planned schedule for an advisory group or will this be through FTRAG-O? It would also be appreciated if a detailed written methodology of study was available.</p> <p>PT – Meetings of the small advisory group are preferable (4-5 people rather than full FTRAG-O forum). Updates can then be provided to the rest of FTRAG-O.</p> <p>JW – Agree with this suggestion.</p>		
5.0	Lessons Learned from Seabird Interaction Study		
5.1	<p>PT provided a summary of some lessons learned in scoping, tendering and delivering the study to date.</p> <ul style="list-style-type: none"> • Programme is key. It is never too early to consider what can be deployed 		



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	<ul style="list-style-type: none"> • Control cabinets. Internal space in WTG towers can be limited for additional equipment, with consequences for monitoring locations. • Limitations on cable bend radius also impacts equipment locations and installation design. • Equipment requires suitable power supply. Important to ensure sufficient surplus is available at instrumented WTGs. At NnG power was required for cathodic protection monitoring at 6 WTG locations, these used up spare power supply so were not available for seabird monitoring equipment. • Equipment fixing type and locations. Installation at certain points on jackets was not always possible due to steel already being manufactured. Modifications are not always possible. The solution was to use holes already included in the design for other purposes. • The study had to be redesigned to ensure desired coverage was still achieved following relocation of equipment due to wind farm operational requirements. The revised study design then had to be reissued for consultation and agreement. 		
6.0	Ornithology Actions Tracker		
	<p>Review of open actions</p> <p>2) Complete</p> <p>3) TE to circulate</p> <p>9) AG raise at meeting in 2 weeks</p> <p>10) EK – GH contract with NRW still TBC</p> <p>11) EK/GH – not complete. GH to catch up with EK</p> <p>13) leave open</p> <p>15) EK. HiDef 2.5 rig comments? No updates currently</p> <ul style="list-style-type: none"> - TE to clarify what the action is? - NB – use of HiDef 2.5 rig in F&T for comparison with 2.0 - Action to be carried forwards – MSS/NS/RSPB to explore and return - NS advisory committee has been looking at aerial survey methods – include that question and Action for NS – once report is finished, share that review <p>17) close</p> <p>18) share posters to group – e.g CWW2022 posters, shared around group in advance. Keep as ongoing action</p> <ul style="list-style-type: none"> - AM – seabird conference coming up in Cork. Tagging and likely to be some other posters - MB – device effects poster ACTION to circulate to FTRAG-O <p>19) ongoing</p>		



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	<p>- date beginning December for next ScotMER</p> <p>20) status of current/upcoming projects. Ongoing action. MSS to discuss with policy about e.g. biannual updates, or distribution in advance of RAG meetings</p>		
7.0	AOB		
7.1	<p><u>PrePARED</u></p> <p>SO – Provided a summary of the PrePared Project studying predator/prey interactions. Focus in the Forth & Tay area in on seabirds and prey fish species. Investigating direct and indirect effects of OWF development on prey distribution and availability. Objective is to de-risk consenting with better understanding of these interactions. The study is funded by OWEC.</p> <p>Fish surveys will be undertaken around F&T OWFs during 2022/23, primarily acoustic surveys. There is potential to coordinate these where aerial seabird survey campaigns are also underway</p>		
7.2	<p><u>EcoWind</u></p> <ul style="list-style-type: none"> Proposals under review Submission of 7 projects, 3 to be selected in July 		
7.3	<p><u>Date of next meeting</u></p> <ul style="list-style-type: none"> Aim for next meeting in Nov/Dec 2022 Proposed focus of meeting is achievements of 2022 season – focusing on study results to date 		